

by its pigment production and failure to ferment certain sugars. Serologically, however, the new micro-organism is wholly unrelated to previously known meningococci, since it is not agglutinated by any of the older type antisera. Thirty per cent of the spinal fluids received from one locality contained this new coccus, whose pathogenicity is indicated by the fact that the mortality in these selected cases was at least 30 per cent.

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Ligation of Pulmonary Vessels in Pulmonary Tuberculosis.—In 1923 Schlaepfer¹ advocated a combination of phrenicotomy and ligation of the lower branches of the pulmonary artery for pulmonary tuberculosis in man, upon the basis of animal experimentation. He had found that ligation of the pulmonary artery was followed by a dense fibrosis of the lung with shrinkage. The purpose of phrenicotomy was to compensate for shrinkage of the lung by the rise of the diaphragm. He also proposed partially occluding the pulmonary veins with Halsted bands which should be removed later. However, he considered this latter procedure as only of academic interest in the state of thoracic surgery at that time. Lately there have been some reports on human patients, of the therapeutic effect of ligation of pulmonary veins in cavernous tuberculosis, by Edel² and Kerschner.³ In four patients in whom other forms of collapse therapy (pneumothorax and phrenicotomy) had failed, ligation of the pulmonary veins was resorted to. The intervention has a favorable influence on the foci of infection as well as on the cavities. The operation is performed under a general anesthetic. An incision, 10 centimeters in length, is made along the upper border of the third rib, which is temporarily resected. By blunt dissection the hilus of the lung is approached and the branches of the pulmonary vein identified. The ligation is done with strong silk thread, which is never knotted tightly, so as to avoid cutting into the vein. Pulmonary edema which had been observed in animals does not develop because there is never a complete ligation of all the branches of the pulmonary vein. The object of the operation is not a complete obstruction of venous drainage of the lung, but a prolonged stasis in its most severely affected portions.

The operation is not intended as a substitute for thoracoplasty but rather as an alternative which is of special use in those patients having rigid cavities. These seem to be helped more by ligation than by thoracoplasty. In fact thoraco-

plasty has its greatest number of poor results in just these patients. The above clinical work is of interest in that it gives the thoracic surgeon a new weapon in the methods available for the surgical treatment of pulmonary tuberculosis.

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Prophylaxis of Ringworm of Feet.—Earl D. Osborne and Blanche S. Hitchcock, Buffalo (*Journal of the American Medical Association*, August 15, 1931), report a method for the prophylaxis of ringworm of the feet which has proved satisfactory as judged by fungicidal tests in the laboratory and from practical experience in the high schools of the city of Buffalo and in many other public and industrial institutions. About a year ago it was suggested to one of them that it might be worth while to test out the fungicidal activity of sodium hypochlorite, the common, cheap and harmless bactericide used in most city water supplies. They at once tested out the fungicidal activity of this chemical to five common types of fungi found on the feet of persons suffering from ringworm. From these tests it was evident that a solution of 0.5 per cent sodium hypochlorite should kill all the common fungi found in ringworm of the feet with exposure of fifteen seconds to these organisms in a watery suspension. Fresh moist deposits of ringworm organisms on the feet should, therefore, be killed with 0.5 per cent sodium hypochlorite, provided the organisms have not penetrated to the deeper cells in the horny layer of the epidermis. With the experimental data at hand, the T. A. Patterson Laboratories supplied the Buffalo high schools, at cost, with sufficient rubber pans and sodium hypochlorite solution to carry out this method of prophylaxis for a period of one year. The company had a special rubber pan prepared whose inside measurements were two feet on a side. These pans were made of heavy rubber and weighed approximately sixty pounds. One pan was placed on the floor of the corridor between the dressing rooms and the shower baths, and another pan was placed at a point past which all the pupils had to pass just before putting on their clothes. The pans were filled up to the two-inch mark with 0.5 per cent sodium hypochlorite solution and this solution was changed every morning. Although the solution was never diminished to such an extent that a refill was necessary, it was evident that a large number of persons stepping in and out of the pan on the way to the shower bath might gradually deplete the solution. A slight, but not appreciable, dilution of the chemical occurred. In order to allow for this dilution and for a margin of error, the authors have recently recommended the use of one per cent sodium hypochlorite instead of 0.5 per cent solution. Up to May 2, 1931, this method of prophylaxis has been employed in the Buffalo high schools for a period of from nine to twelve months. The physical directors of each school have been carefully advised regarding the method and the checking of results. All the complaints have been transmitted to the director of physical education of the Buffalo public schools. He stated that in former years a great many complaints were received and that many new cases of ringworm of the feet appeared each year among high school students. The director of physical education of the public schools of Buffalo reported that this year he had not received a single complaint from parents or pupils because of the appearance of ringworm of the feet. The various directors of the different schools have been well informed on the disease and have been unusually alert in the detection of new cases. None were reported for the entire year. In private practice the authors have noticed a drop in the incidence of new cases of ringworm of the feet in high school pupils of the city of Buffalo. Their records fail to show a single new case, although numerous ones have appeared from the surrounding towns.—*Nebraska Medical Journal*, October 1931.

1 Schlaepfer, Karl: (a) Fibrosis of the Lung Following Ligation of the Pulmonary Artery Combined With Phrenicotomy and With Partial Occlusion of the Pulmonary Veins, *Arch. Surg.*, 6:558, 1923. (b) Ligation of the Pulmonary Artery of One Lung With and Without Resection of the Phrenic Nerve—Experimental Study, *Arch. Surg.*, 9:25, 1924. (c) Ligation of the Pulmonary Artery Combined With Resection of the Phrenic Nerve in Chronic Inflammatory Conditions, Especially Tuberculosis of One Lung, *Am. Rev. Tuberc.*, 10:35, 1924-1925.

2 Edel, H.: Ligation of Pulmonary Veins in Cavernous Pulmonary Tuberculosis, *Zeitschrift für Tuberkulose, Leipzig*, 60:177-256 (April), 1931.

3 Kerschner, F.: Ligation of Pulmonary Veins in Pulmonary Tuberculosis, *Zeitschrift für Tuberkulose Leipzig*, 60:177-256 (April), 1931.